A REPORT ON THE FINDINGS OF THE FIRE REVIEW BOARDS FOR THE NINE MAJOR FOREST FIRES IN BRITISH COLUMBIA IN 1985

Province of British Columbia
Ministry of Forests

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FOREWORD

Following the 1985 fire season, the Minister of Forests advised the public in October, 1985, that there would be boards of review established for the nine major fires and that the final recommendations of the boards would be made public. The terms of reference for these boards were to include all aspects of preparedness, training, initial attack, and fire suppression. The boards were also to review any major concerns expressed by local governments, industry, citizen groups, and members of the general public. The Minister further advised that additional issues could be examined. A news release was issued and advertisements were placed in community newspapers requesting input from industry and any concerned members of the public.

This report is the culmination of this review process. There were over 300 conclusions and recommendations. Many are common to several of the reports. Therefore, a composite consisting of 30 recommendations developed from the review panel hearings, advice received from other sources, and internal recommendations prepared by consultants and senior Ministry personnel, is contained in this report. Each composite recommendation is followed by a summarized action plan which sets out how they will be dealt with.

BOARD MEMBERSHIP AND TERMS OF REFERENCE

FRA Fire	S. Carr (Chairman)	District Manager	Williams Lake
	H. Doberstein	Operations Supt.	Merritt
	R. Scarrow	Regional Staff Manager	Vancouver
	G. Gurnsey	Finance & Admin. Mgr.	Prince George
	D. Radcliffe	Consulting Forester	
LOST Fire	R. Trenamen (Chairman)	District Manager	Prince George
	O. Anderson	Woodlands Mgr., Jacobsen Bros.	Williams Lake
	L. Younghusband	Operations Supt.	Golden
	M. Coney	Mgr., Management Services	Victoria
	M. Lister	Operations Supt.	Sechelt
MATT Fire	W. Hall (Chairman)	District Manager	Ft. St. James
	L. Hamann	Operation Supt.	Nelson
	J. MacKinnon	Chief Forester, Crestbrook	Cranbrook
	J. Fedorak	General Accounting Officer	Kamloops
	W. Pearson	Operations Supt.	Port McNeill
PINK Fire	R. Otsby (Chairman)	District Manager	100 Mile House
	J. England	Coordinator, Fire Prep.	Victoria
	J. Little	Senior Vice President, Forestry Ops., Northwood	Prince George
	R. Simpson	Resource Officer	Fort Nelson
	K. Blom	Operations Supt.	Squamish
RAM Fire	A. Robinson (Chairman)	Regional Manager	Kamloops
	D. Melinka	Forward Planning Manager, Crestbrook	Cranbrook
	A. Amonson	District Manager	Houston
	V. Skaarup	Finance & Admin. Manager	Williams Lake
	H. Thompson	Operations Supt.	Castlegar
RAN Fire	K. Arnett (Chairman)	District Manager	Castlegar
	B. Nordman	General Mgr., Logging, B.C. Forest Products	Mackenzie
	S. Marynovich	Operations Supt.	Prince George
	D. Telford	Finance & Admin. Mgr.	Kamloops
	M. Cleaver	Resource Officer	100 Mile House
SPEN Fire	E. Hewitt (Chairman)	District Manager	Vernon
	J. Menning	District Manager	Horsefly
	S. Tolnai	Chief Forester, Weyerhaeuser	Kamloops
	D. Rice	Finance & Admin. Mgr.	Kamloops
	G. Keir	Resource officer	Grand Forks
TENN Fire	M. Monteith (Chairman)	District Manager	Clearwater
	J. Hall	Operation Supt.	Chilliwack
	G. Munro	Fire Supp. Coordinator	Vancouver
	E. Wilson	Canadian Forest Products	Englewood

WEST Fire	K. Magee (Chairman)	District Manager	Prince George
	H. Quast	Operations Supt.	Terrace
	T. Walker	Finance & Admin. Mgr.	Smithers
	R. Drew	Air Co-ordinator	Nelson
	W. Uphill	Pope & Talbot	Grand Forks

THE FOLLOWING IS A TYPICAL "TERMS OF REFERENCE" PROVIDED TO EACH BOARD:

1.0 To investigate and report on all aspects of the RAM Fire that are within the jurisdiction, control, and/or supervision of the Forest Service.

2.0 Without limiting the generality of the forgoing to:

2.1 Review the physical conditions existing in the Ram Fire area prior to the fire and confirmation of cause.

2.2 Enquire into the factors immediately subsequent to the fire start.

2.3 Assess the action taken at the initial attack stage, air and ground.

2.4 Assess the performance of Forest Service and forest industry employees during fire control operations. Assess the training of crews involved on the fire.

2.5 Establish a subcommittee with the Chairman of the SPEN Fire review board to assess the performance of the Invermere Fire Control Centre.

2.6 Review the organization for suppression of the fire, including the positive and/or negative aspects of working with helicopters and heavy equipment. Specific review to be made of communication problems.

2.7 Review the justification of high cost factors on this fire.

2.8 Review actions taken during and after the fire for the benefit or protection of the public (Canal Flats, White Swan Lake area). Review media and public relation factors.

2.9 Review action taken and/or proposed to mitigate environmental damage.

2.10 Review extent of loss to the annual allowable cut.

2.11 Report on the state of preparedness at the Invermere District.

2.12 Accept, review and consider submissions and presentations from concerned groups or individuals up to November 15, 1985.

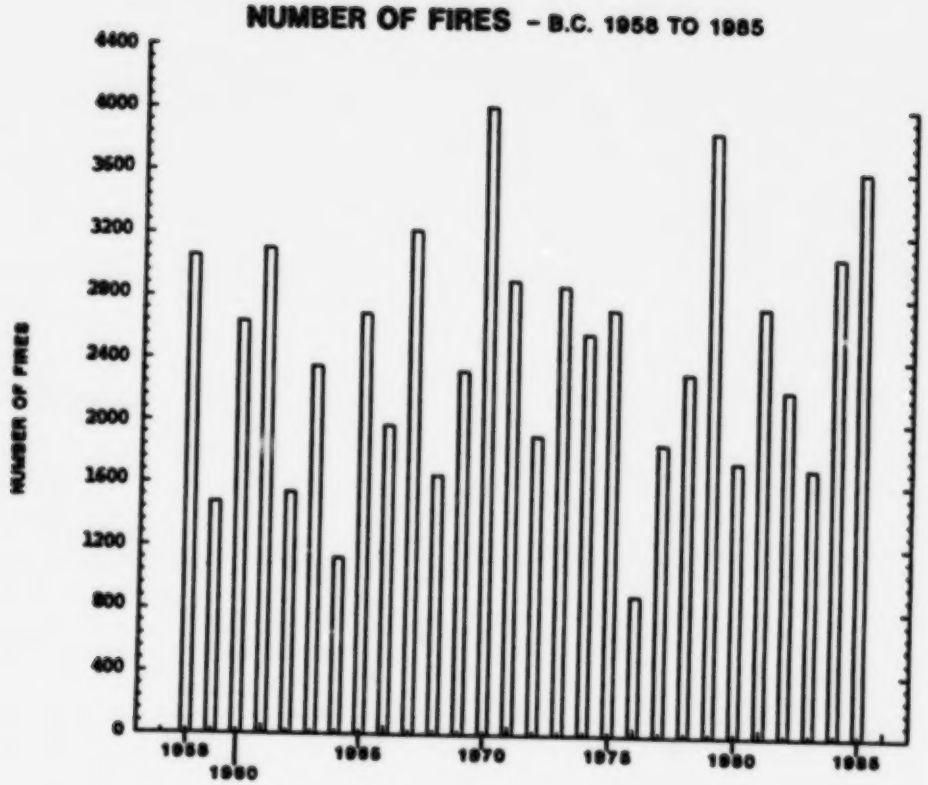
2.13 Review all aspects of financial control as it relates to the RAM fire.

EXECUTIVE SUMMARY

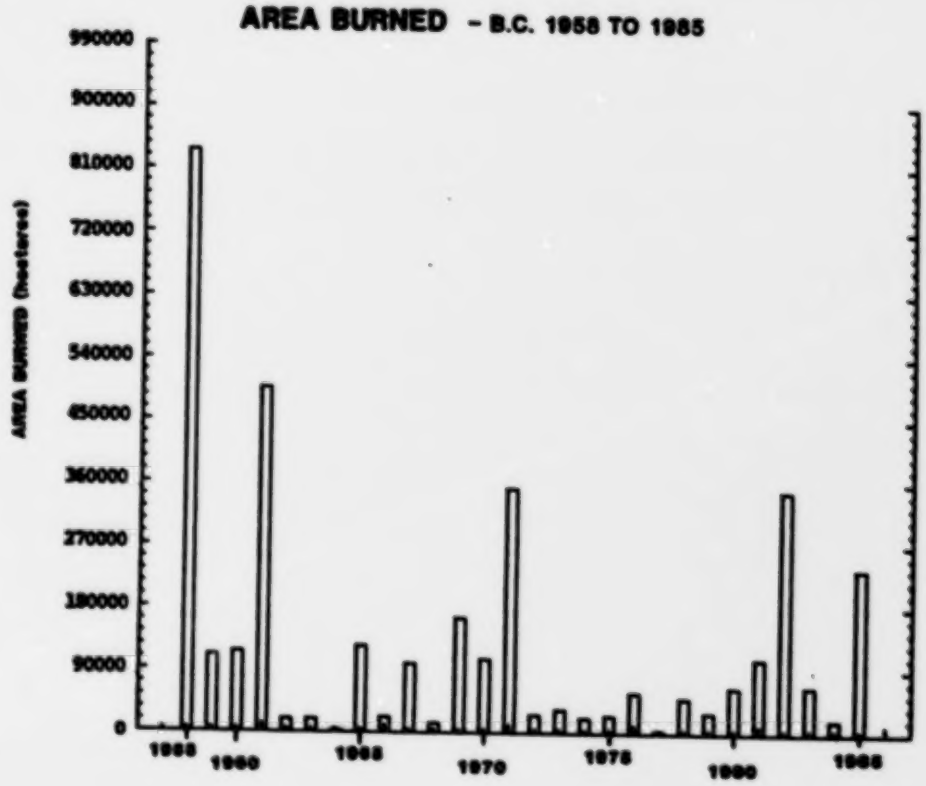
1985 was regarded as the worst fire season in the 74 year history of the British Columbia Ministry of Forests.

The 1985 fire season occurred as a result of abnormal weather patterns in the most severely hit areas. The overwinter soil moisture was less than normal, the rains which normally occur in June failed to materialize, and lightning which usually occurs in August was prevalent in late June and early July. The lightning activity also coincided with the longest daylight hours. During the first half of July, many forest districts were calculating rate of fire spread indices greater than had ever been recorded before.

There were 3,604 fires during the year, the third highest number on record. Of those fires, 1,957 were caused by lightning. Lightning caused fires constituted 54% of the total, well above the 10 year average of 48% lightning and 52% man caused. Lightning-caused fires, when not quickly controlled, are also those that cost the most to suppress and do the most damage.


NUMBER OF FIRES - B.C. 1958 TO 1985
NUMBER OF FIRES
4400
4000
3600
3200
2800
2400
2000
1600
1200
800
400
0
1958
1960
1965
1970
1975
1980
1985

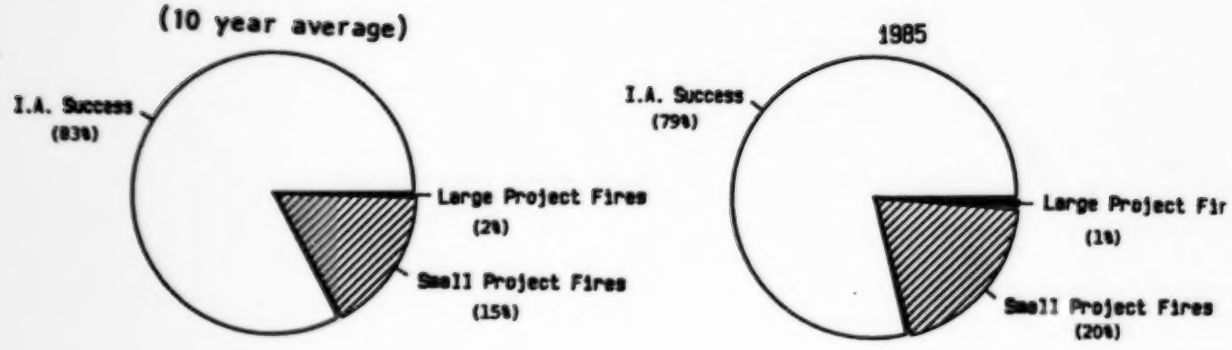
Compared to the average area burned during the five worst years, the 1985 fire control effort was successful. 1985 was fourth in terms of area burned and represented only 29% of the area burned in the previous worst year, 1958.



$33 million damage occurred in 1985, which compares with an average of $48 million incurred during the other four severe fire seasons since 1957.

The following chart compares the initial attack success rate of both small and major project fires. The initial attack success rate in 1985 is similar to the current 10 year average despite the severity of the season.

Comparative Initial Attack Success Rates



The fire control organization achieved a high level of control success during a very severe forest fire season. Despite the severity of the 1985 season, 79% of the fires were contained by 10 a.m. of the day following ignition.

Fire suppression costs exceeded $127 million. Because of the cost of resources such as tractors, skidders, retardants, and helicopters, the success of fire control efforts did not occur without record high fire suppression costs. While the expenditure of large amounts of public funds can be justified in most cases, improvements can be made to reduce expenditures in the future without reducing the effectiveness of the fire suppression effort.

Historically, British Columbia experiences two or three serious fire seasons in any ten year period. It is financially unrealistic to prepare for the worst possible fire season each year. Currently, British Columbia prepares for an above average fire season and plans are in place for rapid expansion to cope with an exceptional season. It is upon this philosophy that the Forest Service forest fire control organization is structured and budgeted.

In addition to the ability of the Forest Service to rapidly expand its forest fire control organization by bringing in resources from other programs within the Ministry and private sector, there are agreements in place that provide assistance through the Winnipeg Canadian Interagency Fire Centre, and its American counterpart, the Boise Interagency Fire Centre. Under these

agreements, British Columbia may provide or receive assistance depending on fire conditions in North America.

Each year the initial attack operation is tested in normal fire operations. The organization's ability to deal with the smaller project fires is also tested at least every two or three years. The opportunity to test the organization's ability to deal with the severe fire season does not occur very often, however, in 1985, British Columbia's forest fire control system was severely tested.

Any fire suppression action which does not contain a wildfire by 10 a.m. of the day following discovery is considered to be a failure. This is a minimum standard as many fires must be contained much sooner to meet the 10 a.m. objective. The Forest Service also recognizes that there will always be some failures. Those project fires considered failures in terms of the 10 a.m. concept can, nevertheless, be fought efficiently and effectively.

MAJOR FIRE OVERVIEWS

There were nine major project fires selected for assessment by the formal board of review process. One of the boards was chaired by a Regional Manager and the other eight were chaired by District Managers. All of the boards had a representative from the forest industry as well as fire and administration people from within the ministry.

The Fra Fire

The Fra fire occurred near North Bend in the Fraser Canyon. It was started by lightning at 19:40 on July 16. It was discovered and reported at 15:17 the next day at .1 hectares. The fire danger was high.

The fire was attacked with air tankers July 17 at 15:30 and this action continued until 18:55 when the fire was estimated at 17 hectares. At 09:30, July 18, a small ground crew arrived at the fire. At 14:00 the fire was classified as out of control and the crew was pulled off. A reorganized and larger attack was then mounted.

At the peak of the action, in excess of 400 men, 9 helicopters, 22 units of heavy equipment, and various other equipment were on the line.

The fire was brought under control on August 18 at 3,336 hectares. The final cost was $4,410,281. The damage was $2,737,349.

The Lost Fire

The Lost fire occurred some 18 kilometers north of Kaslo in the West Kootenay. It started on July 3 at approximately 10:25, and was discovered and reported within 30 minutes. The size was .1 hectares. The fire danger at the time was high.

The fire was attacked by a small Ministry of Forests crew 35 minutes after it was reported. The size at this time was .4 hectares. By noon the fire was spreading rapidly. More men and some air tankers were used that afternoon but the fire size, due to conditions, increased to 16 hectares. The fire was brought under control on August 8 at 1485 hectares. At the peak of the action, 273 men, 45 pieces of heavy equipment, 5 helicopters, and numerous other equipment were on the line. The final cost was $2,680,997 and the damage was $152,222.

The Matt Fire

The Matt fire occurred near Kimberley in the East Kootenay. It was started by lightning at 19:00 on June 29. It was discovered at 21:55 on June 30 at .1 hectares and reported five minutes later. The fire danger was moderate. The fire was attacked at 06:30, July 1, by a four man crew when the fire was 1 hectare in size. Strong winds pushed the fire across the guards in the afternoon.

At the peak of the action, there were 257 men, 50 pieces of heavy equipment, 5 helicopters, and numerous other equipment on the fire lines.

The fire was brought under control on July 30 at 2,233 hectares. The cost was $1,949,221 and the damage was $727,143.

The Pink Fire

The Pink fire occurred in the Bowron River area southeast of Prince George. It was started from a hangover from a prescribed burn which had taken place on June 26. It was detected at 1 hectare on July 4 at 13:32 and reported four minutes later. The fire danger was high. Action was taken by 10 men and 2 skidder tankers. The fire size at attack was 40 hectares. By the end of the day the fire was 1000 hectares in size due largely to severe wind problems.

At the peak of the action, there were 165 men, 1 helicopter, 30 units of heavy equipment, and numerous other equipment on the fire lines.

The fire was brought under control on August 3 at 6,332 hectares. The cost was $1,586,229 and the damage was $600,897.

The Ram Fire

The Ram fire occurred some 15 kilometers east of the town of Canal Flats in the East Kootenay. It was discovered and reported at 5 hectares on

June 30 at 16:42 and was probably caused by lightning. The fire danger was high.

At 17:20 a bird dog aircraft was over the fire but did not call for air tanker action because the fire was now 20 hectares in size and beyond the capabilities of air tankers. The first forest officer arrived at the fire from Invermere at 20:00. Fire action commenced the next morning when the fire was in excess of 90 hectares in size.

At the peak of the action, there were 384 men, 58 units of heavy equipment, 11 helicopters, and numerous other equipment on the fire lines.

The fire was controlled on August 8 at 16,676 hectares. The cost was $5,104,926 and the damage was $2,016,354.

The Ran Fire

The Ran fire occurred about twenty kilometers southwest of Hudson Hope in the Peace River Area. It was started by lightning at 03:00 on July 10. It was discovered and reported at 10:35 on July 11 and was estimated at .2 hectares. The fire danger was rated as extreme. Air tanker action commenced 55 minutes after discovery when the fire was 4 hectares in size. Extreme weather conditions caused rapid spread of this fire.

At the peak of the action, there were 265 men, 43 pieces of heavy equipment, 8 helicopters, and numerous other equipment on the fire line.

The fire was controlled on August 8 at 8,014 hectares. The cost was $3,792,085 and the damage was $1,869,168.

The Spen Fire

The Spen fire, suspected arson, was located near the town of Canal Flats in the East Kootenay. It was discovered by local residents July 4 at 11:00 but was not reported to the Forest Service until 13:18. The fire danger was extreme. The fire was attacked by local residents at 11:00, by air tankers at 14:00 and by a small Ministry of Forests crew at 14:37. The fire at this time was about 50 hectares in size and was spreading rapidly. Initial attack control was not possible due to weather conditions and the rapid spread of the fire.

At the peak of the action, 339 men, 60 pieces of heavy equipment, 7 helicopters, and numerous other equipment were engaged in control action.

The fire was controlled on August 8 at a size of 11,194 hectares. The cost was $3,578,736 and the damage was $648,869.

The Tenn Fire

The Tenn fire was located in the Lillooet River Valley east of Garabaldi Park. It was started by lightning on July 15 at 20:00. It was discovered and reported 20 minutes later at .1 hectares. Fire danger conditions were extreme. The fire was attacked by air tankers 35 minutes after the report was received and with both ground crews and air tankers the next day. Weather conditions and terrain prevented early control of this fire.

At the peak of the action, there were 125 men, 7 helicopters, and various other equipment on the fire line.

The fire was controlled on July 27 at 725 hectares. The cost was $1,574,849 and the damage was $54,773.

The West Fire

This fire started by lightning on July 16 at 15:15 and was reported to the Forest Service almost immediately. The fire danger rating was high. The fire was located near the confluence of the West Kettle and Kettle Rivers, some 70 km. west of Grand Forks. A small crew was on the fire within 1 1/2 hours. The spread of the fire was slow but the terrain was steep and water and/or soil to smother the fire was scarce. The fire remained relatively small for some days but the crew was hampered by falling rocks and a shortage of water.

At the peak of the action, there were 283 men, 53 pieces of heavy equipment, 2 helicopters, and numerous other equipment on the fire line.

The fire was brought under control on July 24 at 35,570 hectares. The eventual cost was $2,128,327 and the damage was $511,226.

SUMMARY OF RECOMMENDATIONS AND ACTION PLANS

The nine review panels produced 310 recommendations. Internal investigations and those undertaken by consultants produced many more. They are summarized in the following 30 composite recommendations.

It is recommended that the Forest Service:

1. Review the performance of some Forest Service staff in relation to the 1985 fire season.

   ACTION: This issue is under review and internal action is underway.

2. Develop a training package to instruct staff personnel how to carry out their staff duties when they are dealing with line people.

   ACTION: This problem applies to several areas of administration and a training package is being developed by the Forest Service Personnel Branch. In addition, a series of seminars involving Forest Service and senior forest industry personnel will deal with this issue. These seminars will take place in May of 1986.

3. Ensure that the normal forest district management structure is not temporarily replaced without the Regional Manager's express permission.

ACTION: An Executive directive has been issued by the Deputy Minister to ensure that the forest district management structure is not replaced by a temporary organization without the specific consent of the Forest Service Executive.

4. Completely review the effectiveness of the forest district fire management structure and clarify the District Fire Control Officer's role, responsibilities, and authority.

ACTION: The seminar identified in Recommendation #2 will address this issue. In addition, a training course is being prepared for implementation prior to the 1987 fire season. It will available in draft form during the 1986 fire season.

5. The establishment of temporary fire support groups under multi fire situations requires improvement by way of increased preparedness.

ACTION: The Forest Service Executive has reconfirmed that fire support activities are to be managed, other than in exceptional circumstances, by temporarily expanding the normal district structure using experienced and knowledgeable local citizens to the full extent possible.

6. Involve the forest industry in fire control planning to a much larger degree.

ACTION: The Forest Service is increasing its participation in the Coast Fire Management Committee and the Northern Interior Fire Management Committee. The Ministry is also taking a leading role in the establishment of a Southern Interior Fire Management Committee. Plans are underway to ensure the development of more District Forest Fire Management Committees involving local forest protection staff, the forest industry, and local government people.

7. Increase the auditing of both fire management decisions and fire accounting procedures while fire suppression activity is ongoing.

ACTION: A fire auditing system, supplemental to the existing uncontrolled fire attack plan(s), was implemented on a trial basis during 1985. This auditing system will be implemented throughout the province for the 1986 fire season. It addresses all organizational, operational, and finance administrative aspects associated with project fire control.

8. Streamline the administration of the contracting and accounting aspects of fire control as well as upgrading the skills of people who carry out these responsibilities.

ACTION: A task force has been struck to develop enhanced procedures and training in this area. Interim procedures will be in place for

the 1986 fire season and complete formal procedures will be completed and implemented over the next two years.

9. Review the administration of overtime for public employees working in forest fire situations.

ACTION: Overtime claims resulting from the 1985 fire season are currently being reviewed. The Forest Service Executive is also ensuring that all supervisory staff and employees who become involved in forest fire activities clearly understand existing policy and procedures and the collective agreements covering overtime.

10. Investigate the potential fire danger to resort developments and other urban settlements which are situated in forest settings.

ACTION: District fire management staff have been assigned the task of developing fire management plans for areas where such plans are not already in place. In addition to the brochures, films, and other public awareness information already in place, further material is being made available to the public.

11. Continue with the ongoing upgrading of the fire detection and reporting system.

ACTION: The Forest Service will continue to evaluate the Lightning Locator System to identify weaknesses. Four additional direction finders, bringing the total number to 19, will be installed over the next two years and a link is also being established to additional sites in Alberta and the Yukon.

The evaluation of the effectiveness of the airborne infrared fire mapping system will continue during the 1986 fire season for night and early morning detection of lightning caused fires.

The Zenith 5555 fire reporting system will continue to be the mainstay of public reporting of forest fires.

A new brochure is currently being developed for pilots which will improve their reporting techniques.

12. Increase the efficiency at the initial attack stage of forest fire suppression through the use of more precise fire probability indicators, more forest industry and other private sector logging crews, and more helitack crews.

ACTION: Four more helitack crews will be used this year, increasing the number from two to six and the total number of persons involved from 40 to 98. These crews will be based in the Vancouver,

Nelson, Prince Rupert, and Kamloops Regions and will be available for use locally and throughout the province.

Improvements have been made to the fire prediction model. For initial attack, more emphasis will be placed on the probable rate of initial fire spread, rather than on just the overall fire danger.

In keeping with past practice, districts will be allocated funds to pay the cost of training local fire wardens and placing additional manpower and fire suppression equipment on standby when deemed necessary. Districts will place a higher priority on the coordination of the forest industry's initial attack capability.

13. Increase the number of fire overhead teams, upgrade the skills of the teams and improve their ability to liase with the general public and industry.

ACTION: For the 1986 fire season, the number of provincial fire overhead teams have been increased from six to eight. The number of teams will be increased to ten in 1987.

Every forest district will be responsible for developing a district fire overhead team(s) which will include private sector participation. These teams will be put in place by June 30, 1986.

Every forest district will also be responsible for ensuring that local private sector people are trained to assist in fire suppression to take advantage of their experience and local knowledge.

14. Ensure that fires which are not controlled by 10 a.m. of the day following discovery are closely monitored by the Forest Service at the Region and Headquarters level.

ACTION: A more formalized approach to uncontrolled fire monitoring is being developed for District, Region, and Branch staff use during the 1986 season.

15. Formalize the fire control plans for major fires to ensure that both District staff and the Fire Boss understand the action which is to be taken to maintain control of the fires.

ACTION: The uncontrolled fire control attack plan format has been redesigned and standardized to ensure that the action to be taken is clearly understood by all concerned.

16. Exercise more control over the use of helicopters for bucketing water and/or fire retardant.

ACTION: A contract has been issued for the development of a helicopter training package for use during the 1986 fire season.

Twenty (20) district supervisory personnel will be trained and certified as helicopter bird dog officers early in the 1986 fire season.

A large number of senior Forest Service and forest industry fire bosses are currently being trained in how to use helicopters tactically.

17. Upgrade inventory control to make more efficient use of fire suppression equipment and minimize the loss, theft, and/or destruction of equipment and supplies.

ACTION: A special finance and administration task force is currently developing such procedures. Interim systems will be in place for the 1986 fire season and complete formal systems will be in place for the 1987 season.

18. Improve the hiring and accounting practices used to administer equipment and manpower on project fires.

ACTION: A formal training course in fireline finance and timekeeping was developed and implemented in 1985. A finance and administration task force is currently developing improved systems to increase administrative efficiency and reduce the likelihood of error at the fireline level.

19. Improve the procedures for the recruitment and basic training of fire fighters.

ACTION: The district staff, assisted by regional fire management staff, are currently providing courses for selected individuals from the forest industry and volunteer fire fighters. Included in this course is an understanding of the Ministry's requirements regarding age, work clothing, and other requirements. Hiring agencies will also be contacted to reaffirm the Forest Service qualifications for persons assisting in fire suppression.

20. Review fire camp construction and operating procedures.

ACTION: A new training package is now in place to provide the necessary skills in the selection of fire camp sites and the construction, operation, and removal of these camps.

21. Continue to emphasize the importance of safety.

ACTION: The Ministry intends to continue its heavy emphasis on fire safety through endorsement by management, by including safety training in every training package and by using private sector safety contractors in project fire situations.

22. Establish proper procedures for contracting security services at fire camps and fire equipment warehouses.

ACTION: A standard fire security services contract format will be in place early in the 1986 fire season. The contract will specify functions, reporting and recording systems.

23. Develop specialized teams to efficiently manage the mop-up stage of fires once they have been brought under control.

ACTION: The existing project fire control forces will be used for this activity in 1986. Specially trained mop-up teams will be utilized when they become available. The possibility of developing specialized internal and contracted mop-up resources is being investigated for this fire suppression function. This will be resolved prior to the commencement of the 1987 fire season.

24. Determine how best to balance the need for centralized control over helicopter resources without obstructing the Ministry's philosophy on decentralized authority, clarify helicopter management roles and develop a systems approach to managing this expensive fire control tool.

ACTION: Helicopters are considered a provincial resource. Improved procedures have been developed for the setting of priorities and distribution of helicopters primarily at the regional level.

An aircraft management information system has been developed and is available for regional use.

25. Produce an up-to-date air operations manual.

ACTION: This manual has been developed. A working draft will be printed and distributed by July, 1986.

26. Improve skills in the safe and efficient use of helicopters at the district level.

ACTION: A helicopter management training package has been completed and will be used to train district staff in the efficient and effective use of helicopters. Much of this training will be completed by mid-summer and all of it will be completed prior to the 1987 fire season.

27. Significantly improve helicopter safety practices.

ACTION: Provision has been made to hire, for a six month period annually, a highly qualified helicopter safety expert.

A list of individuals knowledgeable in helicopter safety, who will be available on short notice and for short periods of time, is being assembled. These individuals will be available to all fire control officers when they are needed.

28. Improve the skills of the Forest Service in dealing with the media and providing information to the public.

ACTION: A fire information handbook for use by Forest Service staff will be available for operational use by April 30, 1986.

A fire information coordinator trained in media relations is presently located in each of the six regional offices.

By early in the fire season there will be one trained fire information spokesperson in each of the 46 forest districts.

A special fire information team has been assembled. This team will be made available to forest regions and districts when the severity of the fire season necessitates that special attention be given to keeping the public and media informed of the fire suppression actions of the Forest Service.

29. Get the Forest Service out of the evacuation role as quickly as possible so that evacuations can be taken over by other legally recognized authorities. Upgrade the Ministry's ability to deal with this public safety problem.

ACTION: The existing agreement between the Ministry of Forests, the Ministry of the Attorney General, and the Ministry of Environment

has been signed off which clarifies responsibilities for evacuation.

New Ministry procedures for dealing with the evacuation process will be in place prior to the 1986 fire season.

30. Markedly improve the fire communications system of the Ministry through the use of contract services, the acquisition of more radio frequencies, better coordination of inter-provincial radio equipment, and better management of radio equipment in the field.

ACTION: A contract has been let for the private sector to make equipment available for communications between the district office and the fire headquarters.

Additional radio frequencies have been applied for through the federal government regulatory agency.

The Ministry is now purchasing additional sophisticated radios. Additional procedures have developed whereby electronics technicians will be made immediately available for assistance on project fires. The Ministry is working with fire control agencies in other provinces to develop a better approach to interchanging radio equipment and including improved radio management.

The new fire auditing system has provision for reviewing the distribution and use of radio equipment on an ongoing basis.

APPENDIX

LIST OF RECOMMENDATIONS

85-A-1-FRA

That all wild fires be subjected to immediate and vigorous initial attack to achieve the 10 a.m. concept.

85-A-2-FRA

That the Chilliwack Forest District and local industry form a district fire protection cooperative.

85-A-3-FRA

That pre-organization plans be more fully developed to include local and industry people and their equipment.

85-A-4-FRA

That only a limited number of key District Staff be permitted to be away during danger class IV and V periods.

85-A-5-LOST

That prior to the next fire season a review of the pre-organization plan for the district take place.

85-A-6-LOST

That a concerted effort be made to train and certify industry and non-industry people who are resident in the area and who would be available for fire suppression.

850A-7-LOST

That plasticized wallet cards be issued to Forest Service employees indicating the certified level of fire fighting skills that the individual has achieved.

85-A-8-LOST

That the seven hour day be used as the basis for calculating fire suppression overtime.

85-A-9-LOST

That where Industry and Ministry of Forests participate jointly on fire suppression activity, the Separate History be prepared jointly.

85-A-10-MATT

That in conjunction with the pre-organization plans, an integrated Ministry of Forests/Industry fire attack plan be developed (who does what and when).

85-A-11-MATT

That there be a co-ordinated effort between industry, municipal officials and the Ministry of Forests to develop a watershed protection plan for all established reserves within the district.

85-A-12-MATT

That reporting relationships presently established should remain intact (i.e. district reports to region, region reports to branch). This does not preclude the fact that additional help will be required at district, region or branch fire control centers. (The Invermere Fire Control Centre did not adhere to established line of command.)

85-A-13-MATT

That district provide adequate full time equivalent time to complete its certification program with industry and out-of-service personnel.

85-A-14-MATT

That a more senior (qualified) person view the fire when the 10 a.m. concept is not met or when daily objectives are not achieved.

85-A-15-MATT

That the weather network be expanded to include fire weather readings from various elevations within the district and that the forest industry become more involved through purchase of portable weather stations and including maintenance and operations. Purchase of such equipment to be paid through credit to Stumpage, however maintenance and operation to be company cost.

85-A-16-MATT

That policy regarding overtime be monitored more closely, and specifically the eight hour break rule.

85-A-17-PINK

That Ministry and Industry personnel involved in fire suppression be trained and certified for the positions identified in the Fire Organization course.

85-A-18-PINK

That the Protection Branch clarify the role of the District Fire Control Officer within the District Fire command.

85-A-19-PINK

That a trained and experienced Duty Officer be used during periods of heavy fire activity and that the District Fire Control Officer be immediately available at the District Office to monitor decisions and fire control action at that office.

85-A-20-PINK

That all fires with suppression costs exceeding one million dollars be subject to a financial audit by a trained audit team.

85-A-21-PINK

That Protection Branch develop a systematic approach for the evaluation of major fire cost items.

85-A-22-PINK

That Ministry overtime policy be enforced.

85-A-23-RAM

The Ministry of Forests and the forest products industries of British Columbia must immediately develop a Partnership Management strategy that will result in a Total Efficient Forest Fire Protection, Fire Suppression and Fire Management Program.

85-A-24-RAM

The immediate formation of a steering committee of senior forest industry and Ministry of Forests representatives with the objective of developing ways and means that will result in a significant reduction of forest resource losses due to wildfire.

85-A-25-RAM

The Regional Manager, Nelson, should initiate steps to ensure that the Regional protection staff monitor the districts more closely to ensure fire preparedness and staffing are adequate.

85-A-26-RAM

A committee should be struck by Protection Branch to design an expanded Fire Control Centre which would move in and take over in those instances where a District has completely lost control of fire suppression. Such an organization should provide for continuity when control is returned to the district.

85-A-27-RAM

The Ministry of Forests executive must make sure that at least three out of four management team members are in place in each District so that they can properly prepare for an emergency situation such as happened at Invermere in 1985.

85-A-28-RAM

Steps should be taken to ensure hours of work of district staff do not jeopardize effective fire control staffing.

85-A-29-RAM

All District staff should be trained and capable of assuming some role in fire control, be it fire line supervision or some support function.

85-A-30-RAM

Members of the expanded Fire Control Centre should be named in advance and should be the best people we have.

85-A-31-RAM

More emphasis should be placed on the certification of Duty Officers.

85-A-32-RAM

Duty Officers assigned for periods of hazard in excess of Class III must be Class 3 or higher Fire Bosses. Lesser qualified staff may be appointed for lower hazard periods or may assist the Duty Officer.

85-A-33-RAN

Fire management plan be updated and in place by April 1st of each year. The fire management plan should relate initial attack capabilities to hazard conditions.

85-A-34-RAN

That the district embark on an aggressive training certification program to ensure there is a local source of people knowledgeable in the areas of:
a) fire line and camp administration.
b) helicopter use (air operations).
c) heavy equipment use.

85-A-35-RAN

Copies of pre-organization plans should be made available to the major licensees.

85-A-36-RAN

District to ensure trained individuals are used in position of authority.

85-A-37-RAN

That the Fire Command Group must ensure a fire organization chart is updated continually through the course of the fire action.

85-A-38-RAN

Geographic variables suggest two more Fire Weather systems to provide total coverage.

85-A-39-RAN

That the District management team review the potential of utilizing Chetwynd as a subsidiary duty officer base relative to hazard and fire activity.

85-A-40-RAN

Protection Branch cannot allow the total deployment of specialized equipment to one problem area.

85-A-41-RAN

Protection Branch must ensure available human resources in various fields of expertise are not totally committed to one problem area at the sacrifice of other areas.

85-A-42-SPEN

That the mandatory District Pre-organization plans be reviewed to ensure that Fire Action Prescription Plans are an integral part thereof in order that the Ministry may be assured that adequate resources are alerted and that contingency plans are in place. Specific monitoring procedures to be developed to confirm these plans are all in place by the start of each fire season.

85-A-43-SPEN

That District Managers with less than Class "B" fire boss certification be required to complete the entire in-service training courses in fire suppression.

85-A-44-SPEN

That the Ministry ensure that all staff associated with fire suppression are competent in basic fire fighting techniques and that training programs be provided to those who are not.

85-A-45-SPEN

That districts commence training and pre-organization of Forest Industry crews to take action on fires by April 15, 1986

85-A-46-SPEN

That steps are taken to ensure that all senior Fire Control Officers are trained and competent in the use of the new "Canadian Forest Fire Behavior Prediction System" prior to the start of the 1986 fire season.

85-A-47-TENN

Districts must implement a program to train and develop all District staff by hands on experience to take on higher level responsibilities with competence in addition to existing fire suppression courses.

85-A-48-TENN

Fire Report standards must be raised in the Region to insure a proper review can be made by the District, Region and Branch. Emphasis must be put on the contents of the separate history and support data.

85-A-49-TENN

Immediate plans must be put in place to improve office space for a fire control centre and provide increased warehouse space to stage fire suppression equipment to fires and to accept equipment into District inventories.

85-A-50-WEST

That the fireline certification program be extended to include key industrial personnel.

85-A-51-WEST

That the Boundary District ensure that both Forest Service and Industry pre-organization plans, as they relate to the west portion of the District, are duplicated in the Kettle Valley Field Office.

85-A-52-WEST

That the Boundary District Command Group reassess and set out the role and responsibility of the District Fire Control Officer to ensure that he is included as an active participant within the District Command Group.

85-A-53-WEST

That the Boundary District management team reassess the positive and negative aspects of having Grand Forks personnel commute daily when involved in fire suppression activity in the west portion of the district.

85-A-54-WEST

That the provision of a suitable duty room at both Grand Forks and Kettle Valley Field Office be considered as a high priority and provided prior to 1986 fire season.

85-B-1-FRA

That the District Finance [redacted]dministration Officer's role in support of a fire overhead team be clarified, including specific responsibilities and guidelines relevant to functional authority and required support interfaces.

85-B-2-LOST

That the Finance and Administration division of the Ministry review policy and procedures to simplify administrative requirements and to ensure they are adequate and up-to-date.

85-B-3-LOST

That issue and storage of all valuable documents be controlled in such a way that all used and unused forms can be readily accounted for.

85-B-4-PINK

That the Financial Management Information System "Fire Suppression Details" program (FMD6060) be expanded to: - separate equipment rental into major equipment types and show a breakdown of working and standby time - break down helicopter time into major use categories i.e. crew or equipment transport, reconnaissance, bucketting and standby time.

85-B-5-MATT

That the use of a "Local Minor Purchase Order" be extended to include purchase of lunches for fire suppression activities.

85-B-6-MATT

That a Financial Management Information System review committee which includes representatives from the Protection Branch, Region and District fire management personnel, be put in place and that this team review the financial control program to ensure that it is capable of producing accurate and useful information.

85-B-7-MATT

That temporary signing authority (spending and payment) be delegated to district staff by April 1st of each year and that firefighter's discharge cheques be written at the fire camp.

85-B-8-RAM

It is recommended that personnel involved in fire accounting be instructed on the importance of properly allocating fire costs to the correct fire.

85-B-9-RAM

That consolidated lists of Ministry Personnel with Financial Signing Authority be maintained.

85-B-10-RAM

That districts, as part of their pre-organization, provide potential/planned crew bosses and time keepers the necessary training in fire record keeping.

85-B-11-RAM

That Ministry Policy be established requiring that proper identification of those personnel authorized to make purchases on behalf of the Forest Service i.e. identification card, authority number.

85-B-12-RAM

That Districts and Regions review the adequacy of form inventories as part of their pre-organization.

85-B-13-RAM

That special fire suppression response centres be established for each district for use in the processing of project fire transactions on a separate machine if necessary.

85-B-14-RAM

That the union contract be amended when it comes up for renegotiation to require all fire suppression overtime to be compensated for in cash.

85-B-15-RAM

That each region be provided with one or two additional complete configurations of hardware, software and necessary modems to provide a district in a multifire situation with resources needed to separate their fire transactions from their regular district financial transactions.

85-B-16-RAM

That a financial audit of RAM Fire procedures be conducted.

85-B-17-RAN

Suppliers must be identified and utilized that will provide the most efficient service i.e. bulk purchase and proximity to the area.

85-B-18-RAN

That the district, in the extreme conditions they were experiencing, must accept the need for assistance to avoid the administration problems usually encountered with heavy fire activity.

85-B-19-RAN

The District Finance & Administration Officer must commit more time to ensuring correct administrative procedures are followed for projects.

85-B-20-RAN

Various levels of supervision must know their level of purchasing authority.

85-B-21-RAN

Receiving authority must ensure total order is delivered.

85-B-22-RAN

The District Finance and Administrative Officer must spend more time monitoring the various financial activities of fire administration.

85-B-23-RAN

Payment must not be approved where appropriately signed supportive information is not available.

85-B-24-RAN

Local Government Agents should be given more authority for payments to expedite the payment process.

85-B-25-RAN

That the district provide the necessary training to ensure people placed in administrative positions know the procedural requirements of the position.

85-B-26-SPEN

That mini computers be provided to all Districts.

85-B-27-SPEN

That fire control centres be required to institute a procedure to prevent duplicate payment by the Fire Control Centre and the fire.

85-B-28-TENN

An immediate priority is to get the Financial Management Information System capability to provide accurate up-to-date costs for individual fires no matter what the size. This should be addressed in almost all Districts. The existing hardware is not sufficient for a major fire season.

85-B-29-WEST

That the Nelson Region and the Boundary District seriously consider providing a support person for the Kettle Valley Field Office during the fire season in order to maintain a continuity of service available from that station.

85-C-1-FRA

The recent trend of not burning any slash in such areas as Scuzzy Creek, due to Silviculture implications, be reviewed with the intent of breaking up continuous areas of unabated slash.

85-C-2-FRA

That studies be conducted during the 1986 field season to further assess any concerns regarding site rehabilitation (e.g. snag falling and reforestation).

85-C-3-PINK

That the Protection Branch prepare a training package on fire weather, fire behavior and fire weather indices and that such training be a requirement of Industry and District personnel involved with prescribed burning.

85-C-4-PINK

That research be conducted and that expertise be made available to explore means whereby slash may be effectively burned under less favourable conditions so as to increase burning opportunity and reduce the chance of major escapes.

85-C-5-PINK

That sufficient Ministry and Section 88 funding be allocated to facilitate 100% mop-up.

85-C-6-PINK

That 100% mop-up take place on all spring/summer burns regardless of plans to reburn.

85-C-7-PINK

That the District and Industry jointly develop a fuel management plan to address backlog burning and ensure that burning keeps pace with logging.

85-C-8-MATT

That canned radio and T.V. ads reporting fire weather, forest restriction orders etc., be expanded to include provinces and states bordering B.C., and that public information signs be erected at border crossings advising same.

85-C-9-RAN

Various levels of forest use restriction should only be recommended to the District Manager. The District Manager must make the decision as only he is accountable for the results.

85-D-1-MATT

That district activate supplementary air patrols with on air observers in cases of heavy lightning activity.

85-D-2-RAM

Lookouts should be manned according to standards specified.

85-D-3-RAM

The lightning locator system should be improved to locate fires more accurately. Data should be analyzed daily and used to determine patrol flights.

85-D-4-RAN

That where no conflicts with labour agreements, lookouts be contracted out on an as needed basis with payment attributed to the fire suppression vote.

85-D-5-SPEN

That air patrol timing be identified in the District Fire Management Plan.

85-D-6-SPEN

Initiate special patrols, equipped with radios to provide detection in isolated but accessible valleys where L/O are blind.

85-D-7-SPEN

Review primary L/O coverage and be prepared to man Lookouts when the hazard dictates.

85-E-1-FRA

That the Chilliwack District make provision for overnighting crews on isolated lightning strikes.

85-E-2-LOST

That the district investigate the concept of establishing a small rural initial attack force there and providing it each year with a complement of fire fighting equipment.

85-E-3-LOST

That the Nelson region consider the potential of helitack crews, possibly located in the Castlegar Slocan area, as a method of rapid attack on fires in this locale.

85-E-4-MATT

That in all cases of initial attack, proper initial attack action be taken with no restrictions (i.e. limited, bucket action etc.).

85-E-5-MATT

That in all cases of initial attack the fire crew must be prepared to overnight, taking advantage of the cooler early morning and late evening hours, and provides for a more efficient use of helicopters.

85-E-7-PINK

That the District reinstitute the Fire Warden/Fire Prevention Officer program to assist in detection, initial attack and fire control.

85-E-8-RAM

Helicopter bucketting should be used for initial attack on fires burning in difficult terrain.

85-E-9-RAN

That Fire Management Plans identify the need to increase initial attack capability relative to hazard.

85-E-10-RAN

That Fire Suppression vote must recognize the need to adjust initial attack capabilities with hazard changes.

85-E-11-RAN

That Districts be encouraged to supplement initial attack forces by use of local hire of experienced crews paid out of fire suppression.

85-E-12-RAN

That the establishment of fire suppression crews such as the Northern Initial Fire Attack Crew be encouraged throughout the province to complement the district initial attack forces.

85-E-13-SPEN

That Districts be monitored to ensure that adequate initial attack forces are employed to cope with possible fire occurrence.

85-E-14-SPEN

That Districts be required to identify the periods of greatest fire incidence and to hire Initial Attack Crews accordingly, in the interest of efficient management and prudent use of F.T.E's.

85-E-15-SPEN

That when it is recognized a fire is beyond the Initial Attack Crew capability, a Fire Boss is immediately assigned to direct suppression action.

85-E-16-WEST

That the initial attack strength at the Kettle Valley station be enhanced by upgrading the training provided to the initial attack crew and by adding a second crew or by expanding the auxiliary organization.

85-F-1-FRA

That on major fires an experienced senior Ministry individual (separate from the District involved) assess the action being taken, cost-benefits, overall organization, etc. He should not be involved directly in any way with the fire itself but rather as an independent observer.

85-F-2-FRA

That only experienced personnel be charged with the responsibility of overseeing more than one fire at any one time.

85-F-3-FRA

That, only one "O" Team be on each fire at any given time.

85-F-4-FRA

That experienced licensee management representatives be invited to assist the fire overhead team.

85-F-5-FRA

That Fire Overhead Teams be pre-organized with a Finance and Administration member.

85-F-6-FRA

That, when "out of province" overhead teams are used, a highly knowledgeable forest officer be attached to the team to advise of procedures, regulations, etc.

85-F-7-FRA

That a checklist/questionnaire plan be developed to ensure all items are clearly understood by the incoming "O" Team.

85-F-8-FRA

That, when junior or inexperienced staff are on fires, their performance be closely monitored.

85-F-9-FRA

That junior/inexperienced Forest Officers be utilized in back-up capacities on project fires.

85-F-10-FRA

That a distinctive method of identifying key fire management personnel be adopted and utilized.

85-F-11-FRA

That a system of manual record keeping and summarization procedures be developed and implemented for fire management administration. This system should incorporate a checklist of key cost areas to provide summary data for management review as well as daily fire cost reporting.

85-F-12-FRA

That Finance and Administration Division of the Ministry take an active role in support of Fire Management Administration on project fires, including pre-organization of administration areas and training of support personnel.

85-F-13-FRA

That the Ministry develop a comprehensive training program for pre-organization of administrative support personnel.

85-F-14-LOST

That specific administrative training be developed for those who will be involved in this area of fire management.

85-F-15-MATT

That the district take greater advantage of the opportunity to train and employ out-of-service personnel for key positions in their fire line organization (Camp Boss, Timekeepers, Fire Boss I & II, Sector Boss, etc.)

85-F-16-MATT

That certification be reviewed annually (by Jan. 30th) and decision to de-certify or reduce certification based on the previous years performance should not directly affect the employees ability to perform in other disciplines.

85-F-17-MATT

That when possible, District Command meetings be held at the fire headquarters and meetings to be concluded no later than 22:00 hours.

85-F-18-MATT

That all forest service staff be easily identifiable on a fire by wearing different coloured hats, decals or even forestry vests. They must be visually identifiable.

85-F-19-MATT

That an "O" Team of qualified finance personnel be organized to take part on major project fires.

85-F-20-MATT

That the administration boss on an "O" Team should have a reasonable background in finance.

85-F-21-PINK

That all fires be organized in accordance with the Series 200 course on Fire Organization allowing, however, reasonable flexibility to ensure efficient use of all resources.

85-F-22-PINK

That all Administrative staff on a fire be certified for their particular role and that a minimum training requirement be completion of the Series 200 course "Fireline Finance and Timekeeping".

85-F-23-PINK

That all fireline supervisory staff keep fire notes of adequate detail and that the fire history map be updated daily.

85-F-24-PINK

That steps be taken to ensure that financial documents, fire notes and other records are neither lost or misplaced during transport back to the District Office.

85-F-25-RAM

There should only be one Fire Boss on each fire.

85-F-26-RAM

Branch should review Overhead Team policy.

85-F-27-RAM

More Overhead Teams should be formed to avoid the need for pickup teams.

85-F-28-RAM

The performance of all Overhead Teams should be reviewed.

85-F-29-RAM

Overhead Team members should receive refresher training periodically to maintain standards.

85-F-30-RAM

One district liaison person should be assigned to each Overhead Team.

85-F-31-RAM

That personnel involved in fire accounting be instructed on the importance of properly allocating fire costs to the correct fire.

85-F-32-RAM

When an Overhead Team or a Ministry Staff member assigned to a fire does not perform adequately, definite recommendations must be made to District, Region and Branch to ensure the person is not assigned to another fire until the problem has been rectified.

85-F-33-RAN

The Fire Boss must ensure all Bosses in the organization are familiar with and are carrying out their responsibilities.

85-F-34-RAN

The Fire Boss must be involved in all aspects of fire control including financial administration.

85-F-35-RAN

Equipment Boss must have training and capabilities.

85-F-36-RAN

That as the fire size and resultant crew, equipment, camp, and administrative responsibilities increase adjustments must be made to ensure the overhead team can handle the increased pressures. Command group members with project capabilities must be mobilized as well.

85-F-37-RAN

For long duration fires an organization turnover plan should be considered based on the overtime reviews.

85-F-38-SPEN

That a Financial Control Officer be appointed to each "O" Team reporting to the Fire Boss and that one of his express duties be daily financial analysis and financial forecast for the fire.

85-F-39-SPEN

The financial obligations of the Overhead Team members be clearly defined and that they be held accountable for proper performance.

85-F-40-SPEN

That all persons trained to control assets on a fire be advised of this requirement.

85-F-41-SPEN

That Provincial Fire Auditors be appointed to all project fires.

85-F-42-SPEN

That packages of forms for 200 man project fires be prepared ready to ship to the project fires on demand.

85-F-43-SPEN

That fire line personnel be required to stay in the base camp as a matter of Ministry policy.

85-F-44-SPEN

Policy and procedures be established for handling over records when supervisory staff change.

85-F-45-TENN

That the Districts develop their personnel into District Overhead Teams and provide training for each specific job locally or through the region.

85-F-46-TENN

Overhead Teams from out of Province should be supplied with a liaison officer to advise on the different rules between Provinces. Overhead Teams should never be used for mop-up or initial attack. If the District cannot handle mop-up after control then help should be obtained from the Region. Overhead Teams should have a 1 week break between fires. The addition of a planning officer to the Overhead Team organization as in the Alberta Overhead Team is recommended.

85-F-47-WEST

That a fire debriefing questionnaire be designed for completion by all overhead personnel on a fire. It should be designed to point out any problems with equipment procedures and support provided to the fire line that may have occurred. A summary of the concerns recorded would then have to be provided with the final fire report.

85-G-1-FRA

That use of Uncontrolled Fire Action Plan procedures be strictly followed in order that suppression action is implemented in a coordinated cost effective manner, consistent with values at risk.

85-G-2-FRA

That Provincial standard basic operating procedures be developed for control of helicopter bucketing on forest fires.

85-G-3-FRA

That the extensive use of retardants delivered by helicopter for mop-up should be questioned and guidelines be developed to determine the cost-benefit aspect where helicopters and retardants are used.

85-G-4-LOST

That Uncontrolled Fire Action Plan be completed whenever:
- Values at risk change.
- Planned strategy and tactics are not successful.
- Total projected cost has been or will be exceeded.
- Anticipated date of control has passed.

85-G-5-LOST

That in future the cost effectiveness of alternative courses of action be weighed, particularly where a substantial sum is involved.

85-G-6-LOST

That each Overhead Team be equipped with a video camera and that districts take steps to acquire the equipment where justified. For the purposes of training and fire review a video record be maintained of significant events which occur on campaign fires.

85-G-7-MATT

That a comprehensive burn-off plan be developed in order to take advantage of natural or established fire breaks surrounding the fire.

85-G-8-MATT

That a greater emphasis be placed on hiring of qualified line locators (fire guards).

85-G-9-RAM

All backburns should be carefully planned and executed.

85-G-10-RAM

Guards should be pushed away from fires.

85-G-11-RAM

Helicopter bucketting should be used in support of ground attack, not in place of it.

85-G-12-RAM

Fires should be fought during all daylight hours with additional night shifts when necessary. Ministry policy should require a two shift system.

85-G-13-RAN

Continued use of Infra-Red scanners on ground.

85-G-14-RAN

Wetting agents should be utilized to more effectively utilize water transported at the expense of aircraft.

85-G-15-SPEN

That fire action Prescription plans be formally signed off by the District Manager and that the District Duty Officer be authorized to implemented the plan.

85-G-16-SPEN

That Fire Suppression Monitoring Reports be considered as an absolute requirement, immediately following and in no case less than forty-eight (48) hours after a district declares an uncontrolled fire.

85-G-17-TENN

Priorities must be established to govern the use of large helicopters with retardant.

85-H-1-LOST

That the present Equipment Hire form and the Time Certificate be re-examined with a view to combining them.

85-H-2-LOST

That consideration be given to some realignment of fire suppression equipment. The 25 man cache at Lardeau should perhaps be phased out and consolidated with Kaslo or used to increase the supply at Nelson.

85-H-3-LOST

That a full time Services Technician be hired to look after equipment and supplies.

85-H-4-LOST

That stringent procedures for evaluating and recording property losses at the end of a fire be enforced.

85-H-5-LOST

That a procedure be established for monitoring and charging back the cost of mechanical service which is preformed by Ministry of Forests staff on contractor equipment working on the fire.

85-H-6-MATT

That equipment and wage rates be established well in advance of fire season and that if new rates are not approved through Order-in-Council prior to April 15th, then the old rates should apply throughout the balance of the year.

85-H-7-MATT

That standing purchase orders be extended to a 24 hour service station to allow for fueling of short-term rental vehicles in emergency situations.

85-H-8-MATT

That greater use be made of inter-ministry vehicle exchange and that each Ministry should provide a list of available vehicles each spring.

85-H-9-MATT

That the Nelson Region initiate a training program for district stockman and to ensure that performance standards are maintained through a strict monitoring schedule.

85-H-10-MATT

That extensive research be carried out to determine if one standard gasoline/oil mixture can be used in all two-cycle engines.

85-H-11-PINK

That the District pre-organization plan be updated using the Protection Manual as reference and listing all equipment that is potentially available within the district.

85-H-12-PINK

That, in view of the improved transport systems which now exist, heavier duty fire pumps be acquired and deployed where prolonged use is required.

85-H-13-RAM

That equipment rates be established well in advance of each fire season.

85-H-14-RAM

Warehousing should be up-graded to allow proper asset management and control.

85-H-15-RAM

That an attendant is assigned to operate any camp fuel dispensers on major project fires, and that fire line fuel caches be centralized as much as possible, and have an attendant assigned to provide security and dispense the fuel.

85-H-16-RAM

That districts be provided adequate warehousing facilities.

85-H-17-RAM

That all Forest Districts have at least one full time warehouseperson.

85-H-18-RAN

Approved rates must be available for use prior to fire season.

85-H-19-RAN

That the ministry seriously investigate the quality of fire suppression equipment, in particular pump units.

85-H-20-RAN

The use of computer lists of equipment by area is a useful tool.

85-H-21-RAN

Only equipment that has been inspected and confirmed satisfactory for fire suppression duty should be listed.

85-H-22-SPEN

That district warehouses establish re-order levels for all fire cache equipment.

85-H-23-SPEN

That the deficiencies and faults in all all terrain vehicle units in the province be rectified.

85-H-24-SPEN

Review vehicle hire rates and especially the daily hire rates.

85-H-25-SPEN

That Policies and Procedures are developed for recovery of costs of services and materials supplied to contractors.

85-H-26-SPEN

That revised equipment rental rate schedules for a future year are published and enforced on or before April 1st of that year.

85-H-27-SPEN

That project fires be required to maintain a ledger showing the balances of attractive assets in the fire area at any time, and that the lists of attractive items be kept to the minimum possible.

85-H-28-SPEN

The control of assets on a fire be given high priority.

85-H-29-TENN

The Equipment Hire Agreement and the Equipment Time Certificate should be combined to cut down paperwork and to insure that a hire agreement is not overlooked.

85-H-30-WEST

That the district develop specific procedures for equipment hire on fires; that such procedures specifically address and designate who will be responsible for completion of the FS21's and that the Resource Officer Protection ensure that expenditors and other appropriate staff are aware of these procedures.

85-H-31-WEST

That priority be given to replacing the existing warehouse/tool cache facility with a properly designed district tool cache/warehouse. As an interim measure rent a better suited, more secure warehouse until a proper one can be provided.

85-H-32-WEST

That the Protection Branch continue negotiations with other cooperating provinces to standardize forest fighting equipment, i.e. hose fittings, radio frequencies etc. so that equipment borrowed or loaned under the agreement will meet the needs of all agencies.

85-H-33-WEST

That the Technical and Administrative Services Branch make a commitment and that a procedure be developed for use at regional and provincial warehouses/fire caches providing for a regular and systematic testing of all mechanical equipment stored in the warehouses to ensure readiness of same. Specialized fire fighting equipment should be stored as a unit, i.e. pumps should be packaged complete with tool box, pump, motor, section hose, foot valve and other items essential to operation of unit.

85-I-1-FRA

That a schedule of rates of pay be developed that has a minimum number of pay classifications.

85-I-2-FRA

That specialized job functions (e.g. snag fallers) be hired under contract.

85-I-3-LOST

That Protection and Financial Services Branch define meal allowance rules and that if the intent is to recover actual cost, the deduction for meals (or for price of meals for people other than firefighters) be increased to cover in accordance with the Treasury Board policy.

85-I-4-MATT

That a safety boss be included in the fire line organization on all project fires.

85-I-5-MATT

That when possible, forest industry crews be taken as a complete unit (manpower and equipment) when impressed for fire suppression duties.

85-I-6-MATT

That a driver's approval program be initiated at every project fire where out-of-service workers are required to operate government vehicles.

85-I-7-MATT

That a comprehensive timekeeper's course be put on prior to fire season for Ministry and out-of-service personnel and that the Financial Officer review accounting records and procedures during the first four days of the fire.

85-I-8-MATT

That wage rate schedules be simplified so there are as few categories as possible, for example, a power saw operator would include snag faller and pump operator be eliminated.

85-I-9-MATT

That the use of soft drinks be eliminated and a greater emphasis be placed on water.

85-I-10-PINK

That the "Forest Fire Fighting Compensation Regulation" be presented for legislative approval prior to the onset of each fire season so as to avoid mid-season changes in rates.

85-I-11-RAM

That provision be made for the contract hire of qualified Industry firefighting crews.

85-I-12-RAM

That the training program for firefighters be significantly expanded so that a sufficient pool of basic trained firefighters can be established to meet the needs of the Forest Service during fire season.

85-I-13-RAM

That the firefighter rates be established prior to start of the fire season in order to minimize the risk of incorrect payments and to minimize the work involved in calculating fire fighter payroll.

85-I-14-RAM

In order to avoid the issuance of excessive numbers of discharge cheques, it is recommended that the limit for individual discharge cheques be raised from $600 to $1,500.

85-I-15-RAM

That discharge cheques be prepared and issued as close to the scene of the fire as possible.

85-I-16-RAM

Industry crews should be used as distinct units with their own supervisors.

85-I-17-RAM

That the training program for fire fighters be significantly expanded so that a sufficient pool of basic trained firefighters can be established to meet the needs of the Forest Service during fire season and to ensure adequate safety of the firefighters employed.

85-I-18-RAM

That consideration be given to access control and distance to fire when siting a fire camp. Likely sites should be identified in the pre-organization plan.

85-I-19-RAM

Protection Branch should develop a policy with regard to maximum camp size.

85-I-20-RAM

That the Invermere Forest District Office complete reconciliations of Commissary Accounts and investigate discrepancies.

85-I-21-RAM

That Fire Managers be reminded of the symbolic as well as the practical importance of their adherence to good safety practices.

85-I-22-RAM

That the Safety/First Aid Coordinator be part of any expanded Fire Control Centre.

85-I-23-RAM

That the purchase and storage of first aid supplies for all fires in a district be centralized.

85-I-24-RAM

Proper footgear and physical condition should be assured at point of hire.

85-I-25-RAM

That the Ministry Commissary Procedures be amended to require the maintenance of Commissary Recovery and Commissary Purchase control accounts in order to facilitate reconciliations.

85-I-26-RAN

Daily time slips are to be signed off by the employee's supervisor, regardless of position.

85-I-27-RAN

The district must pre-organize suppliers to ensure unused case goods can be returned for credit.

85-I-28-RAN

Expectations be discussed with suppliers early in the season.

85-I-29-RAN

Cook house personnel must have experience and abilities relative to crew size.

85-I-30-RAN

As soon as camp situations are realized all public access must be closed and controlled.

85-I-31-RAN

The districts must incorporate capable cooks in pre-organization plans relative to various crew sizes.

85-I-32-RAN

Power saw operators should be categorized as fallers and buckers in rate schedules.

85-I-33-SPEN

That policy and procedures regarding our obligation to provide safety training to pickup crew persons be reiterated.

85-I-34-SPEN

That a formal check-in, check-out procedure be followed at every fire as a matter of policy.

85-I-35-SPEN

In the next printing, raise the limit of discharge cheques to $1,000.00.

85-I-36-TENN

The specialized fire camps developed by the Branch must be increased to ensure that each Region can supply self contained camps to each major fire on a minimum of 3 fires per Region. Regional crews must be trained in setting up these camps in a minimum of time.

85-I-37-TENN

A provincial standard must be set that clarifies guidelines in hiring of Ministry relatives on the basis of best person for the job and avoids conflict of interest.

85-I-38-WEST

That a provincial policy/procedure be developed to provide more specific guidelines for charging of meals on firefighting operations.

85-I-39-WEST

That a procedure be developed whereby additional cheque-signing authorities can be granted in the most expeditious manner and that such procedure be given wide circulation, particularly to Regions and Districts.

85-J-1-MATT

That a formal security plan be in place, including fire line security on all project fires and that a short course be developed to train staff on establishing and monitoring security.

85-J-2-MATT

That a comprehensive list of performance standards be developed for the various security positions (i.e. gate keeper, fire line, office, etc.) and that security officers be provided with proper visual identification.

85-J-3-RAM

That fire camp security forces report to fire bosses rather than a fire control centre.

85-J-4-RAM

That Forest Service employees be provided training and/or reference material on the Charter of Rights and Freedoms and how it effects the use of security.

85-J-5-RAM

That Security firms submit daily time sheets for verification and approval in order to permit the proper verification of hours billed.

85-J-6-RAN

Camp security must be strictly enforced.

85-J-7-SPEN

That a standard security contract be published for use on future fires.

NOTE - NO RECOMMENDATIONS UNDER K - MOP-UP

85-L-1-FRA

That the Forest Service continue to monitor the North Bend water quality problem to determine if further rehabilitative action is required.

85-L-2-RAM

That a detailed assessment of the major fires and their impacts relative to the current Annual Allowable Cut, be carried out and completed as soon as possible.

85-L-3-RAM

That alternatives or options to offset any indicated reduction of the Annual Allowable Cut, be thoroughly examined and implemented to reduce or minimize such reductions.

85-L-4-RAM

That the Ministry of Forests and the forest industry co-operate jointly in the detailed assessment of the fire damage and resultant impacts.

85-L-5-RAM

That realistic time schedules be determined, set and adhered to for the completion of the detailed assessment, which would enable the Ministry of Forests and the forest industry to plan accordingly.

85-L-6-RAN

That the area must be monitored for spruce beetle incidence.

85-L-7-SPEN

That the area be monitored in 1986 to determine the extent of additional rehabilitation funds required.

85-M-1-FRA

That, junior bird dog officers receive extensive training in:
(a) aircraft and retardant capabilities
(b) fire behaviour
(c) weather indicies

85-M-2-FRA

That regional protection personnel monitor the use of helicopters.

85-M-3-PINK

That at the beginning of each fire season the Ministry negotiate the best possible rates for helicopter rentals.

85-M-4-PINK

That a radio log be kept by Wendle Lookout and all baseline stations in accordance with Department of Transport regulations and Ministry policy and that location reports by suppression aircraft be recorded by the fire headquarters.

85-M-5-RAM

That more Bird Dog Officers be trained for rotary wing aircraft.

85-M-6-RAN

Qualified air officer must coordinate bucketting and general aircraft use.

85-M-7-RAN

That to reduce air traffic and costs more weight or consideration must be given to ground transport for crew and small equipment placement.

85-M-8-SPEN

That Protection Branch collate data on serious breaches of aircraft safety procedures on fires in 1985 and distribute a report to all Regions.

85-M-9-SPEN

All refilled fuel drums be clearly marked with spray paint to identify their contents.

85-M-10-TENN

Both Region and District staff should be trained to monitor and co-ordinate aircraft use on larger fires, mainly helicopters. Crews should be trained in the use of heavy helicopters for retardent drops.

85-M-11-TENN

The Regional Protection section should determine the approved equipment for refueling aircraft from a tanker and advise the District of the requirements. Suitable units should be a part of the Pre-organization Equipment Lists. Fueling should normally be from barrels so that each helicopter company can maintain their own fueling area at their assigned pad to eliminate hot fueling.

85-M-12-WEST

That the dispatch and deployment of aircraft in relation to the WEST Fire be thoroughly reviewed by the Nelson Region with a view to improving procedures to ensure maximum effective utilization of aircraft.

85-N-1-FRA

That there be one media person acting for the Forest Service, the Fire Commissioner and P.E.P.

85-N-2-MATT

That Protection Branch develop a media relations handbook, with input from the Nelson Region and Cranbrook Forest District. Project to be completed by May 30th 1986.

85-N-3-MATT

That districts ensure that a minimum of two staff members receive media relations training and that the government information service develop a training package.

85-N-4-RAM

That a minimum of two (2) District staff be fully trained to fullfill the Media and Public Relations need.

85-N-5-RAM

That a workable handbook dealing with the responsibilities of the Media and Public Relations functions be developed as soon as possible.

85-N-6-RAM

That a program dealing with the Media and Public Relations function, be established and maintained for in-service staff.

85-N-7-RAM

That a Provincial policy and standard operations procedure dealing with the Media and Public Relations be established.

85-N-8-WEST

That the Regional Manager identify one or two suitable candidates within the region to act as media relations advisors to the Districts when called upon for advice or assistance.

85-O-1-FRA

That a meeting at Branch level take place between the Forest Service, Provincial Emergency Program and the Fire Commissioner to ensure that each organization is fully aware of its responsibilities during a forest fire.

85-O-2-FRA

That the decision to evacuate not be made at an open meeting. The decision should be made in camera between representatives for the Fire Commissioner, Forest Service and Provincial Emergency Program.

85-O-3-FRA

That prior to and during an evacuation the Forest Service issue periodic written fire bulletins to Provincial Emergency Program and the Fire Commissioner. The involved public should have access to these bulletins.

85-O-4-FRA

That Provincial Emergency Program and the Fire Commissioner discuss the issuance and implication of a partial evacuation order and agree on procedures for such an order.

85-O-5-FRA

That the Forest Service review terminology used to describe fire fighting situations and ensure that Forest Service staff, Provincial Emergency Program staff and the Fire Commissioner are fully aware of what terms should be used and their exact meaning.

85-O-6-FRA

That the Protection Branch have Sylvex analyzed and the chemical properties communicated to District Staff in order that they can address public concerns and environmental issues.

85-O-7-MATT

That the Protection Branch ensure that Provincial Emergency Program and Fire Commissioner's office place greater emphasis on developing emergency preparedness plans for all communities, and the City of Kimberley's plan be used as an example.

85-O-8-SPEN

That all Forest Districts be required to prepare evacuation plans for forest communities in concert with the residents and associated authorities. This should be recognized as a necessary and integral part of pre-organization to be reviewed annually.

85-O-9-SPEN

That the role of the Forest Officer who is also a Provincial Emergency Program volunteer be clarified in a policy statement.

85-O-10-WEST

That the Protection Branch arrange for an investigation of the marketers of synthetic foam products with a view to having the product containers labelled indicating toxicity and corrosiveness.

85-O-11-WEST

That the Protection Branch arrange for the development of a handbook to give guidance in the field of media relations during a forest fire situation.

85-O-12-WEST

That the District pre-organize a suitable local resident in each susceptible community to act as a community liaison person in the event of a major fire activity in that area.

85-O-13-WEST

That the personnel of the Provincial Emergency Program be encouraged to develop effective evacuation plans for forested communities in conjunction with other government agencies and in accordance with established procedures, prior to 1986 fire season.

85-O-14-WEST

That the Boundary District reassess the district to identify all forested communities which may be susceptible to damage from wildfire.

85-P-1-FRA

That a pre-organized, pre-packaged system of radio equipment be developed for deployment to project fires.

85-P-2-FRA

That a communications technician be deployed to install the radio system. Also a pre-trained radio operator be dispatched to set up and maintain a radio control centre at the fire camp.

85-P-3-LOST

That priority be given to the purchase of additional portable radios. For reasons of safety and efficiency, it is imperative that no crew be placed in the field without a well operating communication system.

85-P-4-LOST

That provinces who participate in equipment sharing, cooperate in their procurement of fire suppression radios so that there is compatibility either by prearranged frequency or by programmable equipment.

85-P-5-MATT

That the radio communications section of both branch and region review the district's radio communications plan, and based on the problems which occurred in 1985, provide an update with cost estimates, which will address shortfalls in communications network. (This plan to be presented to the Ministry's executive).

85-P-6-MATT

That the district make greater use of private communication firms, to establish radio communication systems on project fires.

85-P-7-PINK

The total communication system of the Ministry be examined and improved to meet District and Industry fire suppression requirements.

85-P-8-RAM

That a committee be struck to conduct a thorough review of fire suppression communications requirements and that sufficient funding be provided to permit the acquisition of adequate quantities and types of communications equipment needed to meet the requirements identified.

85-P-9-RAN

That the Ministry investigate the impact of losing B.C. Tel repeaters. All ministry radios be multi channel with a special frequency for aircraft use.

85-P-10-SPEN

That the Ministry request additional radio frequencies to be dedicated to fire line use.

85-P-11-WEST

That Technical and Administrative Services Branch and Protection Branch combine their talents to assess priorities for completing in-District communication links in accordance with existing plans. Provision of short term communication capability in mountainous terrain be considered. Allocation of flexible equipment, such as portable repeaters, be made to District level where terrain warrants.